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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michihiro Izumi

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EXAMINER

MURRAY, DANIEL C

ART UNIT

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,612	Applicant(s) IZUMI, MICHIIRO	
	Examiner DANIEL C. MURRAY	Art Unit 2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2443

DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on 01JUL2010. **Claims 34-42** are now pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 34-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chimura et al. (US Patent # US 6,400,719 B1)** in view of **Strauss et al. (US Patent # 5,940,598)** in view of **Mussman et al. (US Patent Publication # US 2004/0139209 A1)** in further view of **Nada (US 2002/0095516 A1)**.

a) Consider **claims 34, 37, and 40**, Chimura et al. clearly show and disclose, a communication apparatus, control method, and non-transitory computer-usable medium

Art Unit: 2443

comprising: a central processing unit (figure 2, column 4 lines 55-67); a memory unit coupled to the central processing unit (figure 2, column 4 lines 55-67); a Voice over Internet Protocol (VoIP) connection unit adapted to establish a VoIP channel via an Internet Protocol (IP) network using a VoIP protocol (figure 1, figure 7, abstract, column 2 lines 1-38, column 3 lines 66-67, column 4 lines 15-34, column 5 lines 45-67, column 6 lines 1-3); an IP communication unit adapted to communicate image data to a communication partner station via the IP network using a file transmission protocol that is one of a plurality of predetermined file transmission protocols (figure 1, figure 7, abstract, column 2 lines 1-38, column 3 lines 66-67, column 4 lines 15-34, column 5 lines 45-67, column 6 lines 1-3); an IP address obtaining unit adapted to obtain an IP address of the communication partner station from a proxy server, based on a telephone number of the communication partner station (figure 1, figure 7, column 2 lines 1-38, column 3 lines 66-67, column 4 lines 1-34). However, Chimura et al. does not specifically disclose a facsimile communication unit adapted to perform facsimile communication using a facsimile protocol; obtaining an IP address of the communication partner station through SIP (Session Initiation Protocol); a determination unit adapted to determine whether a data communication via the IP network uses the file transmission protocol by transmitting an initial message of the file transmission protocol based on a response message received from the SIP proxy server, the response message indicating an end of a SIP message exchange; and a control unit adapted to select the facsimile communication unit or the IP communication unit, in accordance with a determination by the determination unit, wherein, if the determination unit determines that the data communication via the IP network uses the file transmission protocol, the control unit selects the IP communication unit and, if the determination unit determines that the data communication via the IP network does not use the file transmission protocol the control unit selects the facsimile communication unit and wherein, if the control unit

Art Unit: 2443

selects the IP communication unit, the control unit causes the IP communication unit to communicate the image data to the communication partner station using the file reception transmission protocol using the IP address of the communication partner station IP address obtained by the obtaining unit, and, if the control unit selects the facsimile communication unit the control unit causes the facsimile communication unit to communicate the image data to the communication partner using the facsimile protocol communication via the VoIP communication channel established by the VoIP connection unit using the IP address of the communication partner station obtained by the IP address obtaining unit.

Strauss et al. show and disclose a universal or multipurpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet, wherein Strauss et al. discloses a facsimile communication unit adapted to perform facsimile communication using a facsimile protocol (figure 4, abstract, column 1 lines 57-61, column 7 lines 23-29 lines 40-53, column 8 lines 10-20).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Strauss et al. and Chimura et al. since both concern multimode/telephone communication systems communicating over public switch telephone network (PSTN) and public packet data network (IP network) and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate a facsimile communication unit adapted to perform facsimile communication using a facsimile protocol, as taught by, Strauss et al. into the system of Chimura et

Art Unit: 2443

al. for the purpose of transmitting a facsimile signal (Strauss; column 7 lines 23-29), thereby allowing the transmission of facsimile data. However, Chimura et al. as modified by Strauss et al. does not specifically disclose obtaining an IP address of the communication partner station through SIP (Session Initiation Protocol); a determination unit adapted to determine whether a data communication via the IP network uses the file transmission protocol by transmitting an initial message of the file transmission protocol based on a response message received from the SIP proxy server, the response message indicating an end of a SIP message exchange; and a control unit adapted to select the facsimile communication unit or the IP communication unit, in accordance with a determination by the determination unit, wherein, if the determination unit determines that the data communication via the IP network uses the file transmission protocol, the control unit selects the IP communication unit and, if the determination unit determines that the data communication via the IP network does not use the file transmission protocol the control unit selects the facsimile communication unit and wherein, if the control unit selects the IP communication unit, the control unit causes the IP communication unit to communicate the image data to the communication partner station using the file reception transmission protocol using the IP address of the communication partner station IP address obtained by the obtaining unit, and, if the control unit selects the facsimile communication unit the control unit causes the facsimile communication unit to communicate the image data to the communication partner using the facsimile protocol communication via the VoIP communication channel established by the VoIP connection unit using the IP address of the communication partner station obtained by the IP address obtaining unit.

Mussman et al. show and disclose an apparatus which includes a device configured to support a first protocol for initiation, maintenance, and termination of a communication session

Art Unit: 2443

between call endpoints, and to support a second protocol for resolving endpoint addresses for the communication session wherein, Mussman et al. discloses obtaining an IP address of the communication partner station is accomplished by using SIP (Session Initiation Protocol)(abstract, paragraph [0003], [0013], [0014]) and transmitting an initial message of the file transmission protocol based on a response message received from the SIP proxy server, the response message indicating an end of a SIP message exchange (determining the characteristics of the communication session)(abstract, paragraph [0003], [0013], [0014]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Mussman et al. and Chimura et al. as modified by Strauss et al. since both concern routing of communication (i.e. audio, video, data, etc.) over a network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate using SIP (Session Initiation Protocol), as taught by, Mussman et al. into the system of Chimura et al. as modified by Strauss et al. for the purpose of initiation, maintenance, and termination of a communication session (Mussman; abstract), thereby allowing communication session to be established. However, Chimura et al. as modified by Strauss et al. as modified by Mussman et al. does not specifically disclose a determination unit adapted to determine whether a data communication via the IP network uses the file transmission protocol; and a control unit adapted to select the facsimile communication unit or the IP communication unit, in accordance with a determination by the determination unit, wherein, if the determination unit determines that the data communication via the IP network uses the file transmission protocol, the control unit selects the IP communication unit and, if the determination unit determines that the data communication via the IP network does not use the file transmission protocol the control unit

Art Unit: 2443

selects the facsimile communication unit and wherein, if the control unit selects the IP communication unit, the control unit causes the IP communication unit to communicate the image data to the communication partner station using the file reception transmission protocol using the IP address of the communication partner station IP address obtained by the obtaining unit, and, if the control unit selects the facsimile communication unit the control unit causes the facsimile communication unit to communicate the image data to the communication partner using the facsimile protocol communication via the VoIP communication channel established by the VoIP connection unit using the IP address of the communication partner station obtained by the IP address obtaining unit.

Nada shows and discloses an Internet telephone system and an Internet telephone apparatus using the Internet wherein an IP address obtaining means judges by analyzing the telephone number of the communication partner whether or not the communication with the communication partner station through a VoIP transmission path is possible, wherein Nada discloses a determination unit adapted to determine whether a data communication through the IP network uses the predetermined file transmission protocol (abstract, [0028], [0039], [0047], [0052], [0058], [0064]); and a control unit adapted to select the facsimile communication unit or the IP communication unit, in accordance with a determination by the determination unit (abstract, paragraph [0028], [0052], [0058], [0064]), wherein, if the determination unit determines that the data communication through the IP network uses the predetermined file transmission protocol, the control unit selects the IP communication unit (abstract, paragraph [0028], [0052], [0058], [0064]) and, if the determination unit determines that the data communication through the IP network does not use the predetermined file transmission protocol the control unit selects the facsimile communication (abstract, paragraph [0028], [0052], [0058], [0064]) and wherein, if the control unit selects the IP communication unit, the

Art Unit: 2443

control unit causes the IP communication unit to communicate the image data to the communication partner station using the predetermined file reception transmission protocol using the IP address of the communication partner station obtained by the obtaining unit (abstract, paragraph [0028], [0052], [0058], [0064]), and, if the control unit selects the facsimile communication unit the control unit causes the facsimile communication unit to communicate the image data to the communication partner using the facsimile protocol communication via the VoIP communication channel established by the VoIP connection unit using the IP address of the communication partner station obtained by the obtaining unit(abstract, paragraph [0028], [0052], [0058], [0064]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Nada and Chimura et al. as modified by Strauss et al. as modified by Mussman et al. since both concern communication systems communicating over public switch telephone network (PSTN) and public packet data network (IP network) and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate communicating using determining whether or not the communication through a VoIP transmission path is possible, as taught by, Nada into the system of Chimura et al. as modified by Strauss et al. as modified by Mussman et al. for the purpose of analog facsimile communication when communication on the IP network based on the predetermined file reception protocol cannot be performed (Nada; paragraph [0064]), thereby allowing the facsimile communication to be complete regardless of the type of network.

b) Consider **claims 35, 38, and 41, and as applied to claims 34, 37, and 40 above,** Chimura et al. as modified by Strauss et al. as modified by Mussman et al. as modified by Nada clearly show and disclose, the communication apparatus, control method, and non-transitory

Art Unit: 2443

computer-usable medium according to claim 34, 37, and 40, wherein the determination unit judges whether the data communication can be performed with the communication partner station via the VoIP communication channel, by interpreting the telephone number of the communication partner station (Nada; abstract, paragraph [0028], [0052], [0058], [0064]), and wherein, if the data communication cannot be performed with the communication partner station via the VoIP communication channel, the control unit calls the communication partner station on a line switching network and causes the facsimile communication unit to perform analog facsimile communication (Nada; abstract; paragraph [0028], [0052], [0058], [0064]).

c) Consider **claims 36, 39, and 42, and as applied to claims 34, 37, and 40 above,** Chimura et al. as modified by Strauss et al. as modified by Mussman et al. as modified by Nada clearly show and disclose, the communication apparatus, control method, and non-transitory computer-usable medium according to claim 34, 37, and 40, wherein the determination unit judges whether a communication can be performed with the communication partner station via the VoIP communication channel, by interpreting the telephone number of the communication partner station (Nada; abstract, paragraph [0028], [0052], [0058], [0064]), and wherein, if the communication can be performed with the communication partner station via the VoIP communication channel, the IP address obtaining unit tries to obtain the IP address of the communication partner station from the SIP proxy server (Chimura; abstract, column 2 lines 1-38, column 3 lines 66-67, column 4 lines 1-34, Mussman; (discloses using SIP to set up communications) paragraph [0003], [0013], [0014]).

Response to Arguments

5. Applicant's arguments filed 01JUL2010 have been fully considered but they are not persuasive.

Applicant argues Chimura "...fails to teach or suggest determining whether a data communication via an IP network uses a file transmission protocol, much less transmitting an initial message of a file transmission protocol based on a response message received from a SIP proxy server to determine whether a data communication via an IP network uses a file transmission protocol."

The Examiner respectfully disagrees; in response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Nada clearly shows and discloses determining whether a data communication via an IP network uses a file transmission protocol (abstract, paragraph [0028], [0052], [0058], [0064]). Nada clearly discloses in FIG. 1, a telephone number of the destination side telephone set 11 is entered in the calling side telephone set 2. The modem 1 accesses the server 7 to check if the IP address corresponding to the telephone number is present or not. Next, the modem 1 receives the information of the IP address of the destination side modem 10 from the server 7. Using the received IP address, the modem 1 sends a connection request to the destination side modem 10 (communication via file transmission protocol). At this time, suppose a response from the destination side modem 10 is not given within a predetermined time due to a circuit trouble or machine failure. The controller 13 changes over the transmission line switch 19 from the audio processor 17 side to the PSN interface 14 side, thereby controlling to make a call to the partner through the PSN (communication via facsimile protocol).

Art Unit: 2443

Nada clearly discloses that if the receiver is not capable or unable to communicate via the IP address (and thus file transmission protocols); the receiver uses the PSN interface (and thus facsimile protocol). Therefore, Nada clearly discloses determining whether a data communication via an IP network uses a file transmission protocol.

Mussman clearly shows and discloses transmitting an initial message of a file transmission protocol based on a response message received from a SIP proxy server to determine whether a data communication via an IP network uses a file transmission protocol (abstract, paragraph [0003], [0013], [0014]). Mussman clearly shows and discloses SIP is a signaling protocol that can facilitate initiation, maintenance, and termination of a communication session between SIP user agents, SIP software included in or accessible by a device. A SIP user agent (called a client when sending a request) can send a communication session request to another user agent (called a server when receiving and responding to a request) over an IP network. SIP can enable the client and the server to agree upon characteristics of the communication session, such as service policies, media types, etc. (paragraph [0003]). Because the SIP proxy 202 includes RAS messaging capabilities, the unified SIP/H.323 call routing infrastructure 204 can support two different protocols, SIP and H.323, in routing a call between a customer network 206 and a unified egress network 208, where routing can include setting up, controlling, and/or maintaining the call. Furthermore, gateways 224 included in the egress network 208 can be responsive to H.323 and SIP calls on a call by call basis (paragraph [0027]). Mussman clearly shows and discloses the use of an SIP proxy to setup, maintain and terminate communication sessions and to enable the client and the server to agree upon characteristics of the communication session, such as service policies, media types, etc.. Mussman discloses that SIP enables the client and server to agree upon characteristics of the communication session such as service policies, media types, etc. while Mussman does not explicitly disclose

Art Unit: 2443

determining if a file transmission protocol is being used it would be required in initializing a connection which includes determining the characteristics of a communication settings (i.e. what protocols are going to be used). Furthermore, as discussed above, Nada clearly discloses determining whether a data communication via an IP network uses a file transmission protocol (abstract, paragraph [0028], [0052], [0058], [0064]).

Therefore, Mussman and Nada clearly disclose transmitting an initial message of a file transmission protocol based on a response message received from a SIP proxy server to determine whether a data communication via an IP network uses a file transmission protocol.

Applicant argues Chimura does not teach or suggest "...that image data is communicated to a communication partner using a facsimile protocol via a VoIP communication channel, if a determination is made that a data communication via an IP network does not use a file transmission protocol."

The Examiner respectfully disagrees; in response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Chimura as modified by Strauss as modified by Mussman as modified by Nada clearly discloses that image data is communicated to a communication partner using a facsimile protocol via a VoIP communication channel, if a determination is made that a data communication via an IP network does not use a file transmission protocol (it was noted that Mussman was introduced for SIP (Session Initiation Protocol) and is not pertinent/discussed with respect to this particular argument).

Chimura clearly discloses data is communicated to a communication a VoIP communication channel (figure 1, figure 7, abstract, column 2 lines 1-38, column 3 lines 66-67, column 4 lines 15-34,

Art Unit: 2443

column 5 lines 45-67, column 6 lines 1-3). Chimura clearly discloses a telephone communication method for a communication system allowing a plurality of telephone terminals to communicate via Internet or Intranet (Private IP (Internet Protocol) Network)(i.e. VoIP)(column 1 lines 10-14).

Strauss clearly discloses that image data is communicated to a communication partner using a facsimile protocol (figure 4, abstract, column 1 lines 57-61, column 7 lines 23-29 lines 40-53, column 8 lines 10-20). Strauss discloses a universal or multipurpose network server having enhanced processing functions which are performed in association with a telecommunications network to provide multi-mode communications via a combination of the public switched telephone network (PSTN) and a public packet data network, such as the Internet, wherein Strauss et al. discloses a facsimile communication unit adapted to perform facsimile communication using a facsimile protocol.

Nada clearly discloses that data is communicated to a communication partner using a facsimile protocol, if a determination is made that a data communication via an IP network does not use a file transmission protocol (IP)(abstract, paragraph [0028], [0052], [0058], [0064])

Nada clearly discloses an Internet telephone system and telephone apparatus for making an Internet telephone call by entering a telephone number. The system includes a telephone set, a modem, a partner side telephone set, its modem, and a server connected to the Internet for registering a telephone number and an IP address corresponding to the telephone number by relating to each other. The modem, when assigned with an IP address from an Internet service provider, transmits this IP address and the telephone number of the telephone set connected to itself to the server, and registers them. The telephone set and the modem, receiving the telephone number of the partner side telephone set, make a connection operation by acquiring the IP address corresponding to the partner telephone number from the server (abstract). In FIG. 1, a telephone

Art Unit: 2443

number of the destination side telephone set 11 is entered in the calling side telephone set 2. The modem 1 accesses the server 7 to check if the IP address corresponding to the telephone number is present or not. Next, the modem 1 receives the information of the IP address of the destination side modem 10 from the server 7. Using the received IP address, the modem 1 sends a connection request to the destination side modem 10 (communication via file transmission protocol). At this time, suppose a response from the destination side modem 10 is not given within a predetermined time due to a circuit trouble or machine failure. The controller 13 changes over the transmission line switch 19 from the audio processor 17 side to the PSN interface 14 side, thereby controlling to make a call to the partner through the PSN (communication via facsimile protocol). Nada clearly discloses that if the receiver is not capable or unable to communicate via the IP address (and thus file transmission protocols); the receiver uses the PSN interface (and thus facsimile protocol).

Image data (e.g. a facsimile) of Strauss is communicated over the VoIP channel of Chimura using a facsimile protocol or Strauss. If it is detected that communication is not possible via file transmission protocol as in Nada the image data is sent via facsimile protocol over VoIP of Chimura (rather than the PSN in Nada). In short, the references clearly show the communication of data over an IP network. The PSN in Nada that would normally handle analog communication of a voice call is replaced by the VoIP channel of Chimura such that when one form of communication is not possible (i.e. using a file transmission protocol) the communication is accomplished using an alternative protocol (i.e. facsimile protocol).

Therefore, the combination of Chimura as modified by Strauss as modified by Mussman as modified by Nada discloses that image data (facsimile) is communicated to a communication partner using a facsimile protocol (Strauss) via a VoIP communication channel (Chimura), if a determination

Art Unit: 2443

is made that a data communication via an IP network does not use a file transmission protocol (Nada).

Conclusion

The Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant, in preparing the responses, to fully consider each of the cited references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage disclosed by the Examiner.

With respect to any amendments to the claimed invention, it is respectfully requested that Applicant indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

If Applicant intends to make numerous amendments the Examiner respectfully requests that Applicant submit a clean copy of the claims in addition to the marked up copy of the claims in order to expedite the examination process.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- | | |
|----------------------|----------------------|
| ➤ US 7,620,682 B1 | ➤ US 2003/0123436 A1 |
| ➤ US 2010/0042737 A1 | ➤ US 2004/0047345 A1 |
| ➤ 5,712,712 | ➤ US 7,577,131 B2 |
| ➤ US 6,230,189 B1 | ➤ US 2004/0062210 A1 |
| ➤ US 2005/0256934 A1 | ➤ US 2006/0092926 A1 |

Art Unit: 2443

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|----------------------|----------------------|
| ➤ US 2006/0146784 A1 | ➤ US 7,576,882 B2 |
| ➤ US 2006/0146783 A1 | ➤ US 7,751,091 B2 |
| ➤ US 2006/0146792 A1 | ➤ US 7,693,989 B2 |
| ➤ US 2007/0146804 A1 | ➤ US 7,706,354 B2 |
| ➤ US 7,305,676 B1 | ➤ US 7,734,783 B1 |
| ➤ US 2008/0112392 A1 | ➤ US 2010/0142707 A1 |
| ➤ US 2009/0141708 A1 | ➤ US 7,752,277 B2 |
| ➤ US 7,577,131 B2 | ➤ US 7,791,748 B2 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL C. MURRAY whose telephone number is 571-270-1773. The examiner can normally be reached on Monday - Friday 0800-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on (571)-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. C. M./
Examiner, Art Unit 2443

Application/Control Number: 10/559,612

Page 3

Art Unit: 2443

/Tonia LM Dollinger/

Supervisory Patent Examiner, Art Unit 2443